

WAC 173-201A-230, and it has established water quality criteria for ammonia in all surface waters at WAC 173-201A-240. There is little or no data available regarding nutrient levels in discharges from CAAP facilities that may be authorized to discharge under the General Permit in Washington, however, and EPA cannot conclude that applicable water quality standards for nutrients are being exceeded. Further, EPA Region 10 concurs with reasoning for not including nutrient limitations in EPA's Effluent Limitations Guidelines [67 Fed. Reg. 57872 (Sept. 12, 2002)] that control of suspended solids will effectively control concentrations of other pollutants of concern, including BOD and nutrients, because other pollutants are either bound to the solids or are incorporated into them. Here, EPA Region 10 does seek to better characterize discharges in terms of nutrients and to determine that applicable water quality standards for nutrients are being met with the requirement for an Effluent Characterization Study for certain dischargers authorized under the General Permit. EPA also believes that implementation of best management practices to minimize the discharge of excess feed will assist to limit nutrient residuals in discharges.

In contrast to EPA Region 10's present decision to not include limitations for nutrients, the General Permit for Aquaculture Facilities in Idaho does include effluent limitations for this parameter. At the time that EPA Region 10 was writing that General Permit, the State was also developing TMDL determinations for phosphorous and nitrogen compounds in impaired watersheds throughout the State. Due to attention on nutrient loadings to State waters and the availability of meaningful data for phosphorous in CAAP effluents, EPA did include numeric limitations for phosphorous in that General Permit.

Drugs, Disinfectants and Other Chemicals

There are no applicable technology based limitations or effluent guidelines in place for most drugs, disinfectants, and other chemicals used within the CAAP industry. EPA has also observed that State and Tribal water quality criteria do not specifically limit residuals of these materials in discharges from CAAP facilities, although applicable water quality criteria usually include criteria for copper, which is used in aquaculture facilities as copper sulfate or in chelated copper compounds for the control of bacteria and algae. State and Tribal water quality criteria, however, generally include narrative criteria, which prohibit levels of toxic substances in concentrations that impair beneficial uses of receiving waters.

In writing the General Permit for Aquaculture Facilities in Idaho, EPA Region 10 acknowledged that literature suggested some significant risks associated with the discharge of residual disease control drugs and other chemicals but concluded that such substances delivered to fish by ingestion do not pose a risk of harm or degradation to aquatic life or other beneficial uses. EPA also concluded, however, that such substances applied in solution for the immersive treatment of fish may present a risk of harm to aquatic life

immediately downstream of a point of discharge. Because very little effluent data for these substances was available at that time, because analytical methods for their detection and measurement were very difficult at best, and because normal operating procedures provided maximum dilution of immersive treatments in facility discharges, EPA did not include specific effluent limitations for these substances in the general permit for Idaho.

In the Effluent Limitations Guidelines for the CAAP industry at 40 CFR 451, EPA also did not include limitations for drugs, disinfectants, and other chemicals, citing the relative absence of data on their use. The Effluent Limitations Guidelines, like the general permit for Idaho, require some degree of reporting on the use of drugs, disinfectants, and other chemicals in authorized discharges.

In this General Permit, except for copper and chlorine, EPA Region 10 is not including WQBELs for drugs, disinfectants, and other chemicals that are potentially applied within the facilities to be covered by the General Permit. Little data is available regarding the use of these materials, and EPA Region 10 believes that implementation of best management practices will adequately control effluent levels of these materials. The requirements for Annual Production and Discharge Reports and for certain facilities to conduct Effluent Characterization Studies, that include comprehensive reporting regarding the use of drugs, disinfectants, and other chemicals, will enable EPA to reassess the potential for harm attributable to these materials; and in the meantime, EPA may require whole effluent toxicity testing, if the analysis shows reasonable potential to cause or contribute to an in-stream excursion above applicable water quality criteria for toxic substances.

Copper, primarily in the forms of copper sulfate and chelated copper compounds, is used in fish hatcheries to control algae and other vegetation that is susceptible to the toxic effects of copper uptake; and it is used to control the growth of external parasites and bacteria on fish.

The Colville Confederated Tribes do not have numeric water quality criteria for copper but have adopted narrative criteria for toxics - prohibiting concentrations of toxics greater than those of public health significance or which may cause acute or chronic toxic conditions to the aquatic biota, or which may adversely affect designated water uses. (40 CFR 131.35)

The State of Washington also prohibits the introduction of toxic substances above natural background levels, which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic toxicity to the most sensitive biota dependent upon those waters, or adversely affect public health. The State has also adopted the following numeric water quality criteria for copper for the protection of aquatic life.